#2 OIPE

RAW SEQUENCE LISTING   DATE: 01/08/2002
PATENT APPLICATION: US/09/956,998A   TIME: 10:10:53

Input Set : N:\Crf3\RULE60\09956998A.raw
Output Set: N:\CRF3\01082002\I956998A.raw

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 1 <110> APPLICANT: Black Jr., Charles A.
 2 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR ACTIVATING
 3       GENES OF INTEREST
 4 <130> FILE REFERENCE: 5722-2(35722/191928)
 6 <140> CURRENT APPLICATION NUMBER: US/09/956,998A
 7 <141> CURRENT FILING DATE: 2001-09-20
 9 <150> PRIOR APPLICATION NUMBER: 09/446,402
10 <151> PRIOR FILING DATE: 1999-12-20
13 <150> PRIOR APPLICATION NUMBER: 60/050,772
14 <151> PRIOR FILING DATE: 1997-06-25
15 <160> NUMBER OF SEQ ID NOS: 19
16 <170> SOFTWARE: FastSEQ for Windows Version 4.0
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 4279
20 <212> TYPE: DNA
21 <213> ORGANISM: Artificial Sequence
22 <220> FEATURE:
23 <223> OTHER INFORMATION: Recombinant Molecule containing multiple cloning
24       site, kozak sequence, LacZ gene.
25 <221> NAME/KEY: misc_feature
26 <222> LOCATION: (1)...(64)
27 <223> OTHER INFORMATION: Multiple cloning site
28 <221> NAME/KEY: misc_feature
29 <222> LOCATION: (65)...(79)
30 <223> OTHER INFORMATION: Consensus sequence for the "Kozak sequence"
31       (translation initiation)
32 <221> NAME/KEY: prim_transcript
33 <222> LOCATION: (80)...(4279)
34 <223> OTHER INFORMATION: Beta galactosidase
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38       tggttaggta ccttctgagg cggaaagaac cagctgtgga atgtgtgtca gttagggtgt     180
39       ggaaagtccc caggctcccc agcaggcaga agtatgcaaa gcatgcatct caattagtca     240
40       gcaaccaggt gtggaaagtc cccaggctcc ccagcaggca gaagtatgca aagcatgcat     300
41       ctcaattagt cagcaaccat agtcccgccc ctaactccgc ccatcccgcc cctaactccg     360
42       cccagttccg cccattctcc gccccatggc tgactaattt tttttattta tgcagaggcc     420
43       gaggccgcct cggcctctga gctattccag aagtagtgag gaggcttttt tggaggccta     480
44       ggcttttgca aaaagcttgg gatctctata atctcgcgca acctattttc ccctcgaaca     540
45       ctttttaagc cgtagataaa caggctggga cacttcacat gagcgaaaaa tacatcgtca     600
46       cctgggacat gttgcagatc catgcacgta aactcgcaag ccgactgatg ccttctgaac     660
47       aatggaaagg cattattgcc gtaagccgtg gcggtctggt accggtgggt gaagaccaga     720
48       aacagcacct cgaactgagc cgcgatattg cccagcgttt caacgcgctg tatggcgaga     780
49       tcgatcccgt cgttttacaa cgtcgtgact gggaaaaccc tggcgttacc caacttaatc     840
50       gccttgcagc acatccccct ttcgccagct ggcgtaatag cgaagaggcc cgcaccgatc     900
51       gcccttccca acagttgcgc agcctgaatg gcgaatggcg ctttgcctgg tttccggcac     960
52       cagaagcggt gccggaaagc tggctggagt gcgatcttcc tgaggccgat actgtcgtcg    1020
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 53    tcccctcaaa ctggcagatg cacggttacg atgcgcccat ctacaccaac gtaacctatc    1080
 54    ccattacggt caatccgccg tttgttccca cggagaatcc gacgggttgt tactcgctca    1140
 55    catttaatgt tgatgaaagc tggctacagg aaggccagac gcgaattatt tttgatggcg    1200
 56    ttaactcggc gtttcatctg tggtgcaacg ggcgctgggt cggttacggc caggacagtc    1260
 57    gtttgccgtc tgaatttgac ctgagcgcat ttttacgcgc cggagaaaac cgcctcgcgg    1320
 58    tgatggtgct gcgttggagt gacggcagtt atctggaaga tcaggatatg tggcggatga    1380
 59    gcggcatttt ccgtgacgtc tcgttgctgc ataaaccgac tacacaaatc agcgatttcc    1440
 60    atgttgccac tcgctttaat gatgatttca gccgcgctgt actggaggct gaagttcaga    1500
 61    tgtgcggcga gttgcgtgac tacctacggg taacagtttc tttatggcag ggtgaaacgc    1560
 62    aggtcgccag cggcaccgcg cctttcggcg gtgaaattat cgatgagcgt ggtggttatg    1620
 63    ccgatcgcgt cacactacgt ctgaacgtcg aaaacccgaa actgtggagc gccgaaatcc    1680
 64    cgaatctcta tcgtgcggtg gttgaactgc acaccgccga cggcacgctg attgaagcag    1740
 65    aagcctgcga tgtcggtttc cgcgaggtgc ggattgaaaa tggtctgctg ctgctgaacg    1800
 66    gcaagccgtt gctgattcga ggcgttaacc gtcacgagca tcatcctctg catggtcagg    1860
 67    tcatggatga gcagacgatg gtgcaggata tcctgctgat gaagcagaac aactttaacg    1920
 68    ccgtgcgctg ttcgcattat ccgaaccatc cgctgtggta cacgctgtgc gaccgctacg    1980
 69    gcctgtatgt ggtggatgaa gccaatattg aaacccacgg catggtgcca atgaatcgtc    2040
 70    tgaccgatga tccgcgctgg ctaccggcga tgagcgaacg cgtaacgcga atggtgcagc    2100
 71    gcgatcgtaa tcacccgagt gtgatcatct ggtcgctggg gaatgaatca ggccacggcg    2160
 72    ctaatcacga cgcgctgtat cgctggatca aatctgtcga tccttcccgc ccggtgcagt    2220
 73    atgaaggcgg cggagccgac accacggcca ccgatattat ttgcccgatg tacgcgcgcg    2280
 74    tggatgaaga ccagcccttc ccggctgtgc cgaaatggtc catcaaaaaa tggctttcgc    2340
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 76    ttggcggttt cgctaaatac tggcaggcgt ttcgtcagta tccccgttta cagggcggct    2460
 77    tcgtctggga ctgggtggat cagtcgctga ttaaatatga tgaaaacggc aacccgtggt    2520
 78    cggcttacgg cggtgatttt ggcgatacgc cgaacgatcg ccagttctgt atgaacggtc    2580
 79    tggtctttgc cgaccgcacg ccgcatccag cgctgacgga agcaaaacac cagcagcagt    2640
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 84    ccgcatggtc agaagccggg cacatcagcg cctggcagca gtggcgtctg cggaaaacc     2940
 85    tcagtgtgac gctccccgcc gcgtcccacg ccatcccgca tctgaccacc agcgaaatgg    3000
 86    attttgcat cgagctgggt aataagcgtt ggcaatttaa ccgccagtca ggctttcttt    3060
 87    cacagatgtg gattggcgat aaaaaacaac tgctgacgcc gctgcgcgat cagttcaccc    3120
 88    gtgcaccgct ggataacgac attggcgtaa gtgaagcgac ccgcattgac cctaacgcct    3180
 89    gggtcgaacg ctggaaggcg gcgggccatt accaggccga agcagcgttg ttgcagtgca    3240
 90    cggcagatac acttgctgat gcggtgctga ttacgaccgc tcacgcgtgg cagcatcagg    3300
 91    ggaaaacctt atttatcagc cggaaaacct accggattga tggtagtggt caaatggcga    3360
 92    ttaccgttga tgttgaagtg gcgagcgata caccgcatcc ggcgcggatt ggcctgaact    3420
 93    gccagctggc gcaggtagca gagcgggtaa actggctcgg attagggccg caagaaaact    3480
 94    atcccgaccg ccttactgcc gcctgttttg accgctggga tctgccattg tcagacatgt    3540
 95    ataccccgta cgtcttcccg agcgaaaacg tctgcgctg cgggacgcgc gaattgaatt    3600
 96    atggcccaca ccagtggcgc ggcgacttcc agttcaacat cagccgctac agtcaacagc    3660
 97    aactgatgga aaccagccat cgccatctgc tgcacgcgga agaaggcaca tggctgaata    3720
 98    tcgacggttt ccatatgggg attggtggcg acgactcctg gagcccgtca gtatcggcgg    3780
 99    aattccagct gagcgccggt cgctaccatt accagttggt ctggtgtcaa aaataataat    3840
100     aaccgggcag gccatgtctg cccgtatttc gcgtaaggaa atccattatg tactatttaa    3900
101     aaaacacaaa cttttggatg ttcggtttat tcttttttctt ttactttttt atcatgggag    3960
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102        cctacttccc gttttttcccg atttggctac atgacatcaa ccatatcagc aaaagtgata    4020
103        cgggtattat ttttgccgct atttctctgt tctcgctatt attccaaccg ctgtttggtc    4080
104        tgctttctga caaactcgga acttgtttat tgcagcttat aatggttaca aataaagcaa    4140
105        tagcatcaca aatttcacaa ataaagcatt ttttttcactg cattctagtt gtggtttgtc    4200
106        caaactcatc aatgtatctt atcatgtctg gatcctctag agtcgacctg caggcatgca    4260
107        agctggcact ggccgtcgt                                                  4279
109 <210> SEQ ID NO: 2
110 <211> LENGTH: 20
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
113 <220> FEATURE:
114 <223> OTHER INFORMATION: Synthetic oligonucleotide
115 <400> SEQUENCE: 2
116        gaatacaaag cttatgcatg                                                  20
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119 <211> LENGTH: 13
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Synthetic oligonucleotide
124 <400> SEQUENCE: 3
125        gaatacaaag ctt                                                         13
127 <210> SEQ ID NO: 4
128 <211> LENGTH: 20
129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial Sequence
131 <220> FEATURE:
132 <223> OTHER INFORMATION: Synthetic oligonucleotide
133 <400> SEQUENCE: 4
134        aaagcttatg catgcggccg                                                  20
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137 <211> LENGTH: 20
138 <212> TYPE: DNA
139 <213> ORGANISM: Artificial Sequence
140 <220> FEATURE:
141 <223> OTHER INFORMATION: Synthetic oligonucleotide
142 <400> SEQUENCE: 5
143        cggccgcatc tagagggccc                                                  20
145 <210> SEQ ID NO: 6
146 <211> LENGTH: 25
147 <212> TYPE: DNA
148 <213> ORGANISM: Artificial Sequence
149 <220> FEATURE:
150 <223> OTHER INFORMATION: Synthetic oligonucleotide
151 <400> SEQUENCE: 6
152        gcggccgcat ctagagggcc cggat                                            25
154 <210> SEQ ID NO: 7
155 <211> LENGTH: 24
156 <212> TYPE: DNA
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157 <213> ORGANISM: Artificial Sequence
158 <220> FEATURE:
159 <223> OTHER INFORMATION: Synthetic oligonucleotide
160 <400> SEQUENCE: 7
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163 <210> SEQ ID NO: 8
164 <211> LENGTH: 30
165 <212> TYPE: DNA
166 <213> ORGANISM: Artificial Sequence
167 <220> FEATURE:
168 <223> OTHER INFORMATION: Synthetic oligonucleotide
169 <400> SEQUENCE: 8
170       aatacaaagc ttatgcatgc ggccgcatct                      30
172 <210> SEQ ID NO: 9
173 <211> LENGTH: 20
174 <212> TYPE: DNA
175 <213> ORGANISM: Artificial Sequence
176 <220> FEATURE:
177 <223> OTHER INFORMATION: Synthetic oligonucleotide
178 <400> SEQUENCE: 9
179       catgcataag ctttgtattc                                 20
181 <210> SEQ ID NO: 10
182 <211> LENGTH: 13
183 <212> TYPE: DNA
184 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: Synthetic oligonucleotide
187 <400> SEQUENCE: 10
188       aagctttgta ttc                                        13
190 <210> SEQ ID NO: 11
191 <211> LENGTH: 20
192 <212> TYPE: DNA
193 <213> ORGANISM: Artificial Sequence
194 <220> FEATURE:
195 <223> OTHER INFORMATION: Synthetic oligonucleotide
196 <400> SEQUENCE: 11
197       cggccgcatg cataagcttt                                 20
199 <210> SEQ ID NO: 12
200 <211> LENGTH: 20
201 <212> TYPE: DNA
202 <213> ORGANISM: Artificial Sequence
203 <220> FEATURE:
204 <223> OTHER INFORMATION: Synthetic oligonucleotide
205 <400> SEQUENCE: 12
206       gggccctcta gatgcggccg                                 20
208 <210> SEQ ID NO: 13
209 <211> LENGTH: 25
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
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212 <220> FEATURE:
213 <223> OTHER INFORMATION: Synthetic oligonucleotide
214 <400> SEQUENCE: 13
215       atccgggccc tctagatgcg gccgc                              25
217 <210> SEQ ID NO: 14
218 <211> LENGTH: 24
219 <212> TYPE: DNA
220 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: Synthetic oligonucleotide
223 <400> SEQUENCE: 14
224       ggccgcatgc ataagctttg tatt                               24
226 <210> SEQ ID NO: 15
227 <211> LENGTH: 30
228 <212> TYPE: DNA
229 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Synthetic oligonucleotide
232 <400> SEQUENCE: 15
233       agatgcggcc gcatgcataa gctttgtatt                         30
235 <210> SEQ ID NO: 16
236 <211> LENGTH: 1798
237 <212> TYPE: RNA
238 <213> ORGANISM: Unknown
239 <220> FEATURE:
240 <223> OTHER INFORMATION: mRNA sequence for Firefly luciferase
241 <400> SEQUENCE: 16
242       gaauacaaag cuuaugcaug cggccgcauc uagagggccc ggauccaaau ggaagacgcc    60
243       aaaaacauaa agaaaggccc ggcgccauuc uauccucuag aggauggaac cgcuggagag   120
244       caacugcaua aggcuaugaa gagauacgcc cugguuccug gaacaauugc uuuuacagau   180
245       gcacauaucg aggugaacau cacguacgcg gaauacuucg aaauguccgu ucgguuggca   240
246       gaagcuauga aacgauaugg gcugaauaca aaucacagaa ucgucguaug cagugaaaac   300
247       ucucuucaau ucuuuaugcc ggguguggqc gccguuauuu aucggaguug caguugcgcc   360
248       cgcgaagcac auuuauaaug aacgugaauu gcucaacagu augaacauuu cgcagccuac   420
249       cguaguguuu guuuccaaaa aggggyuugca aaaaauuuug aacgugcaaa aaaaauuacc   480
250       aauaauccag aaaauuauua ucauggauuc uaaaacggau uaccagggau uucagucgau   540
251       guacacguuc gucacaucuc aucuaccucc cgguuuuaau gaauacgauu uguuaccaga   600
252       guccuuugau cgugacaaaa caauugcacu gauaaugaau uccucuggau cuacuggguu   660
253       accuaagggu guggcccuuc cgcauagaac ugccugcguc agauucucgc augccagaga   720
254       uccuauuuuu ggcaaucaaa ucauuccgga uacugcgauu uuaaguguug uuccauucca   780
255       ucacgguuuu ggaauguuua cuacacucgg auauuugaua uguggauuuc gagucgucuu   840
256       aauguauaga uuugaagaag agcuguuuuu acgaucccuu caggauuaca aaauucaaag   900
257       ugcguugcua guaccaaccc uauuuucauu cuucgccaaa agcacucuga uugacaaaua   960
258       cgauuuaucu aauuuacacg aaauugcuuc uggggggcgca ccucuuucga agaagucgg  1020
259       ggaagcgguu gcaaaacgcu uccaucuucc agggauacga caaggauaug ggcucacuga  1080
260       gacuacauca gcuauucuga uuacacccga gggggaugau aaaccgggcg cggucgguaa  1140
261       aguuguucca uuuuuugaag cgaagguugu ggaucuggau accgggaaaa cgcugggcgu  1200
262       uaaucagaga ggcgaauuau gugucagagg accuaugauu auguccgguu auguaaacaa  1260
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